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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,013	06/21/2005	Michael K. Fauble	70078-0212	8711
20915	7590	06/28/2007		
MCGARRY BAIR PC 32 Market Ave. SW SUITE 500 GRAND RAPIDS, MI 49503			EXAMINER HOOK, JAMES F	
			ART UNIT 3754	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,013

Applicant(s)

FAUBLE, MICHAEL K.

Examiner

James F. Hook

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3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/8/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fauble (286). The patent to Fauble discloses the recited flexible tubular article for transport of volatile hydrocarbons comprising a relatively thin inner layer of an elastomeric form of FKM fluoropolymer 14, a relatively thin intermediate layer of a thermoplastic form of THV fluoropolymer 16 where such is 500 grade which is extruded, the two layers act as a barrier layer to volatile hydrocarbons, a durable outer layer 18 bonded to the outside of the intermediate layer and coextensive therewith, the thicknesses of the layers overlap the ranges set forth in claims 2-4, the elastomeric polymer making up the durable outer layer is selected from the same list as claim 5, a first tie layer 20 can be provided to between the intermediate layer and the elastomeric polymer layer, the first tie layer can be the same as that set forth in claim 7, the inner layer can be made conductive such as by adding carbon black thereto, and an added reinforcing layer can be provided. The patent to Fauble discloses all of the recited structure with the exception of using an 800 grade THV instead of a 500 grade THV, however such is considered merely a choice of mechanical expedients where it would

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have been obvious to one skilled in the art to use routine experimentation to arrive at an optimum material that would provide the best barrier properties as such would only require routine skill in the art to change the grade of THV used, where such would provide better barrier properties and would protect the environment from volatile gases that may permeate the FKM layer.

Claims 8-11, and 15-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fauble (286) in view of Jing (393). The patent to Fauble discloses all of the recited structure and method with the exception of providing a plurality of THV layers with varying amounts of fluorine content or grade. The patent to Jing discloses that it is old and well known in the art to form multilayer compositions of fluoropolymers such as THV in fuel hoses, and to provide them with varying grades and amounts of fluorine which can include grades 200, 500, 740, and 2178 are used, where Fauble teaches the use of 500 grade as well, where it is taught one or more fluoropolymer layers can be utilized in the hose structure, and that any of the fluoropolymers can be used for the different layers, thereby teaching the use of various types of THV, such as using a layer of THV 200 and an adjacent layer can be THV 500 for providing more barrier properties, where the layers are coextruded, thereby teaching the method of providing additional THV layers for bonding purposes as well as additional barrier properties and where such can be provide in increasing amounts of fluorine content. It would have been obvious to one skilled in the art to modify the hose of Fauble by providing additional layers of THV of differing grades and amounts of fluorine content as

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suggested by Jing to provide more barrier properties and connection layers to adhere layers together to better protect against permeation and failure of the hose.

Conclusion

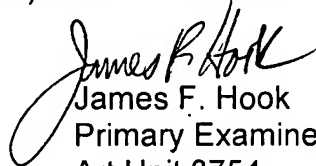
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references to Niki (641 and 374), Wiggins, Kitami, Igarashi, Kodama, Ishida, Bertero, and Shifman disclosing state of the art multilayer tubes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


James F. Hook
Primary Examiner
Art Unit 3754

JFH